Nigel W.T. Quinn, PhD, P.E., D.WRE

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ACADEMIC DEGREES

BSc (Hons) Agricultural Engineering (summa cum laude)	Cranfield University, England	1977
MS Agricultural and Civil Engineering	Iowa State University, Ames, IA.	1981
PhD Water Resources Systems Engineering	Cornell University, Ithaca, NY.	1987

ACADEMIC

Staff Scientist : Lawrence Berkeley National Laboratory	Oct 90 - present
Group Leader : HydroEcological Engineering Advanced Decision Support	Sept 02 – present
Visiting Scientist, Energy Biosciences Institute, University of California, Berkeley	Jan 08 - present
Associate Scientist, Department of Civil Engineering, University of California, Merced	Jun 05 – present
Adjunct Research Professor, Department of Plant Science, California State University, Fresno	May 05 – present
Research Engineer : University of California, Berkeley	Oct 99 – Sep 03
Postdoctoral Research Associate IV : Cornell University	Jan 87 - Sep 90
Program on Science, Technology and Society	
General Electric Fellow : Cornell University	Jan 85 - Jan 87
Program on Science, Technology and Society.	
Research and Teaching Assistant : Cornell University	Jan 81 - Jan 85
Department of Agricultural Engineering.	
Lecturer : Iowa State University Faculty	Dec 77 - Jan 81
Department of Agricultural Engineering.	

INDUSTRY / GOVT.

Water Resources Engineer/Cooperator : US Bureau of Reclamation, Division of Planning	Sep 90 - present
Consultant Hydrologist, MFG Inc. (TetraTech Inc.)	Sep 00 - Oct 04
Senior Water Resources Engineer/ Planner	Jan 87 - Sep 90
Interagency San Joaquin Valley Drainage Program	
Research Engineer, US Dept. of Agriculture, Agricultural Research Service	Jan 78 – Dec 79
Irrigation Engineer : Tate and Lyle Corporation	Jun 77 - Dec 77
Spalding, England.	

RECENT AND ONGOING RESEARCH

- Principal Investigator; (2011–2014) : Modeling technical support, decision support tool development, data analysis and assimilation, GIS integration and staff support related to Reclamation planning - $570,000
- Principal Investigator; (2010–2013) : Examining frameworks for evaluating groundwater substitution water transfers, phase III wetland groundwater conjunctive use investigation and development of data management and quality assurance techniques in support of real-time monitoring. US Bureau of Reclamation - $350,000
- Principal Investigator; (2010–2012) : GIS-based decision support for wetland drainage salinity management. _ US Bureau of Reclamation, Science and Technology Program - $70,000
- Principal Investigator; (2010–2011) : Modeling and analysis of salt fate and transport on agricultural land and seasonal wetlands on the west-side of the San Joaquin Basin, US Bureau of Reclamation, Program to Meet Standards - $40,000
- Principal Investigator; (2008–2009) : Geophysical groundwater quality evaluation in East Bear Creek, California US Bureau of Reclamation - $100,000
- Principal Investigator; (2007–2008) : Improving WESTSIM surface-groundwater simulation model . US Bureau of Reclamation - $80,000

- Principal Investigator; (2006–2007) : Use of geophysical techniques to map groundwater quality . US Bureau of Reclamation - $43,000
- Principal Investigator; (2007–2008) : technical improvements and maintenance of the LBL precision bed sampler . US Bureau of Reclamation - $10,000
- Principal Investigator; (2007–2008) : Enhancement of return flow simulation modeling . US Bureau of Reclamation - $42,900
- Principal Investigator; (2006–2007) : Application of high resolution remote sensing to vegetation mapping in San Joaquin Basin grasslands . US Bureau of Reclamation - $76,200
- Principal Investigator; (2005–2008) : Cooperative project with Grassland Water District and California Department of Fish and Game. Implementation of Real-Time Water Quality management in the Grassland Ecological Area. State Water Resources Control Board - $960,000.
- Co-Principal Investigator; (2005–2008) : Cooperative project with Patterson Irrigation District. Real-Time, Salt and Nutrient Drainage Load Reduction Strategies – Patterson & West Stanislaus Irrigation District. State Water Resources Control Board - $997,000.
- Co-Principal Investigator; (2005–2008) : Cooperative project with Patterson Irrigation District. Decision support for implementation and evaluation of agricultural water reuse best management practices to improve district-level irrigation efficiency. CALFED Water Use Efficiency Program - $500,000.
- Principal Investigator; (2005–2007) : Use of geophysical techniques for reconnaissance assessment of groundwater pumping potential beneath San Joaquin and Tulare basin wetlands. US Bureau of Reclamation - $120,000.
- Co-Principal Investigator (with Tom Harmon, UC Merced); (2005-2006) ; Real-time sensor development for adaptive real-time management of wetland salinity. UC Salinity-Drainage Program. $33,000.
- Co-principal Investigator : (2004-2007) : San Joaquin River Dissolved Oxygen TMDL. CALFED Directed Action. With : US Geological Survey, University of the Pacific, UC Davis, Systech Inc., Jones and Stokes Inc., West-side Drainage Authority - $6,800,000.
- Principal Investigator : (2004 – 2005) : Enhancement of return flow simulation from agriculture and seasonal wetlands using WESTSIM – USBR - $76,000.
- Principal Investigator : (2003 – 2005) : SJRRHRP Water Quality Monitoring and Decision Support System – USBR - $139,760
- Principal Investigator : (2004 – 2005) : Geophysical logging techniques for groundwater resource quality mapping in the Grassland Ecological Area – USBR Science and Technology Grant - $30,000.
- Principal Investigator : (2004 – 2006) : Use of remote sensing for estimation of wetland evapotranspiration in the San Luis National Wildlife Refuge, California. USBR Science and Technology Grant - $117,000.
- Co-Principal Investigator : (2003-2005) (with Norm Miller, Larry Dale and Chris Ding) : Laboratory Director's Research and Development Grant. The California Water and Energy System: An Approach for Addressing Future Crises. LBNL - $450,000.
- Principal Investigator : (2003 – 2004) : Calibration and application of WESTSIM, using updated IGSM2 model code, to drainage problem areas and seasonal wetlands – USBR - $69,000.
- Principal Investigator : (1999 – 2004) : Adaptive Real-Time Management of Wetland Return Flows in the Grasslands Basin, California. CALFED grant - $635,000.
- Principal Investigator : (2003-2005) Adaptive Real-Time Management of Wetland Salinity from the San Luis National Wildlife Refuge. CALFED grant - $360,000. Co-PI : Dennis Woolington, US Fish and Wildlife Service.
- Co-Principal Investigator : (2001 – 2003) : Discriminating Between West-Side Sources of Nutrients and Organic Carbon Contributing to Algae Growth and Oxygen Demand in the San Joaquin River. CALFED grant with Will Stringfellow - $179,000.
- Co-Principal Investigator : (2001 – 2004) : Panoche-Silver Creek Selenium Management Planning. CALFED grant with Panoche Silver Creek CRMP- $890,000.
- Co- Investigator : (1999 – 2003) : An integrated modeling system for environmental impact analysis of climate variability and extreme weather events in the San Joaquin Basin, California. EPA Grant with Professor John Dracup, UCB - $900,000.
- Principal Investigator : (1995 – 1998) : Application of Advanced Decision Support Systems to Water Resources Planning. USBR grant - $220,000.
- Research Coordinator : (1996 - 2001) : Algal-bacterial selenium removal system in the Panoche Water District. USBR and CALFED grants with Professors Oswald and Leighton - $1,300,000.

- Principal Investigator : (1997 - 2002) : Development of the Westside Integrated Groundwater-Surface Water Model (WESTSIM). USBR grant - $190,000.
- Principal Investigator : (1993 - 1995) In-transit selenium losses in the Grasslands Basin . USBR grant - $120,000.
- Principal Investigator : (1994 - 1995) : Modeling selenium in-transit losses. SWRCB Grant with Professor H.W. Shen - $60,000.
- Co-Principal Investigator : (1996- 2002) : Real-Time water Quality Management in the San Joaquin River. CALFED grant and USBR challenge grant with Department of Water Resources and California Regional Water Quality Control Board - $1,200,000.

RESEARCH INTERESTS

Application of systems analysis techniques to solving complex water resources problems. Analysis of environmental, social and economic impacts of global climate change in California. Development of decision support systems and simulation models to improve understanding and facilitate negotiation of solutions to future water resource and water quality problems. Primary research focus during past decade has been on developing decision making tools for assessing the impacts of drainage water quality projects on the west side of the San Joaquin Valley with an emphasis on salinity and selenium drainage. Field research has included investigations of natural selenium in-transit losses in a wetland channel used for drainage discharges and surface water deliveries, cooperative work with private and public wetlands in the Grasslands Basin to develop monitoring and management responses to a salinity TMDL and participation in microbial mesocosm studies to identify bacterial species capable of selenium bioremediation. Results of these natural system bioremediation experiments are being used to help optimize the performance of an algal-bacterial selenium bioremediation plant for treating agricultural drain water in the Panoche Water District in the western San Joaquin Valley.

PROFESSIONAL SERVICE

Chair Technical and Economic Committee, CVSALTS – Central Valley Salinity Coalition, (2008 – present)
Convener, 2002, 2003, 2004, past Convener, 2005. California Water and Environmental Modeling Forum.
Co-Chair and Founder, Water and Environment Technology Team (WETT), LBNL, 2005-2008
Berkeley Laboratory Delegate, White House Conference on Industrial Ecology
Department of Energy, Water-Energy Nexus Committee
Chair, Inter-Laboratory Committee on Water Resources
CALFED Water Quality Technical Group
San Joaquin River Management Program (Steering Committee and Water Quality Subcommittee)
American Society of Civil Engineers
American Geophysical Union
Water Environment Federation
California Irrigation Institute
US Committee of Irrigation and Drainage
International Symposium for Environmental Software Systems (Fellow; Board of Directors)
International Environmental Modeling and Software Society (Fellow; Board of Directors)
Chair, Technical Committee, Central Valley Salinity Coalition, CVSALTS
Member Executive Committee, Central Valley Salinity Coalition, CVSALTS

LICENCES

Registered Professional Engineer

HONORS

Hugo B. Fischer Award 2013. Awarded by the California Water and Environmental Modeling Forum for outstanding contributions to water and environmental modeling in California.
Diplomate American Academy for Water Resources Engineers D.WRE
Who's Who in America (since 2001)
Who's Who in California (since 1988)
Gamma Sigma Delta, Alpha Epsilon, Honor Societies

SOCIAL/CIVIC

Co-President, Wine Country Polo Club
Berkeley Yacht Club
Woodlake Neighborhood Association
Dominican-Black Canyon Neighborhood Association
Manorial Society of Great Britain

PEER REVIEWED JOURNAL PUBLICATIONS

1. Quinn N.W.T. and J.R. Burns. 2013. Impact assessment of modified drawdown schedules on managed seasonal wetland waterfowl habitat using high resolution remote sensing and advanced image analysis techniques. *Submitted to*: Journal of Environmental Modeling and Software.

2. Quinn N.W.T. and Olga Epshtein. 2013. Seasonally-Managed Wetland Footprint Delineation and Evapotranspiration Estimation using Landsat ETM and Satellite Imagery. *Submitted to*: Journal of Environmental Modeling and Software.

3. Gerard F. Laniak G.F., G. Olchin, J. Goodall, A. Voinov, M. Hill, P. Glynn, G. Whelan, G. Geller, N.W.T. Quinn, M. Blind, S. Peckham,, S. Reaney, N. Gaber, R. Kennedyand A. Hughes. 2012. Integrated Environmental Modeling: A Vision and Roadmap for the Future. *Accepted*: Journal of Environmental Modeling and Software.

4. Hua P., S. Borglin, N.A. Kamennaya, L. Chen, H. Park, L. Mahoney, A. Kijac, G. Shan, L. Krystle, L. Chavarría, C. Zhang, N.W.T. Quinn, D. Wemmerc, H. Holman , C. Jansson . 2012. Metabolic phenotyping of the cyanobacterium Synechocystis 6803 engineered for production of alkanes and free fatty acids. Applied Energy. In Press.

5. Rahilly P.J.A., D. Li, Q. Guo, J. Zhu[1], R. Ortega, N.W.T. Quinn, and T.C. Harmon. 2012. Mapping swamp timothy *(Cripsis schenoides)* seed productivity using spectral values and vegetation indices in managed wetlands. International Journal of Remote Sensing. 33(16), 4902–4918.

6. Gardner J. C., N.W.T. Quinn, J. Van Gerpen, and J. Simonpietri. 2011. Oilseed and algal oils as biofuel feedstocks. Soil and Water Conservation Society, Position Paper. http://www.swcs.org. Soil and Water Conservation Society, Sept 30, 2011.

7. B.S. McIntosh, J.C. Ascough II, M. Twery, J. Chew, A. Elmahdi, D. Haase, J. Harou, D. Hepting, S. Cuddy, A.J. Jakeman, S. Chen, A. Kassahun, S. Lautenbach, K. Matthews, W. Merritt, N.W.T. Quinn, I. Rodriguez-Roda, S. Sieber, M. Stavenga, A. Sulis, J. Ticehurst, M. Volk, M. Wrobel, H. van Delden ,S. El-Sawah. 2011. Environmental Decision Support Systems (EDSS) Development – Challenges and Best Practices. Special Issue, Environmental Modelling and Software.

8. Quinn N.W.T. 2011. Contrasts in the use of information technology for real-time salinity management in the San Joaquin Basin, California, USA and Hunter River Basin, New South Wales, Australia. Agricultural Water Management. Vol. 98 (6), p.930-940, Apr 2011.

9. Quinn N.W.T., R. Ortega and L. Holm. 2011. Environmental sensor networks and continuous data quality assurance to manage salinity within a highly regulated river basin. Decision Support Systems in Agriculture, Food and the Environment: Trends, Applications and Advances.

10. Quinn N.W.T., G. Lee and D. Cozad. 2010. Information technology and decision support tools for stakeholder-driven river basin salinity management. IEEE Proceedings, 43rd Annual HICSS Conference, Kawaii, Hawaii, Feb 5-9, 2010.

11. Quinn N.W.T., R. Ortega, P.J.A, Rahilly and C.W. Royer. 2010. Use of environmental sensors and sensor networks to develop water and salinity budgets for seasonal wetland real-time water quality management. Environmental Modelling and Software. Vol 25, 1045-1058.

12. Quinn N.W.T, 2009. Information technology and innovative drainage management practices for selenium load reduction from irrigated agriculture to provide stakeholder assurances and meet contaminant mass loading policy objectives. Agricultural Water Management, 96 (3), p.484-492, Mar 2009.

13. Quinn N.W.T, 2009. Environmental decision support system development for seasonal wetland salt management in a river basin subjected to water quality regulation**.** Agricultural Water Management, 96 (2), p.247-254, Feb 2009.

14. Stringfellow W.T, Herr J., Litton G., Brunell M., Borglin S., Hanlon J., Chen C., Graham J., Burks R., Dahlgren R., Kendall C., Brown R. and Quinn N.W.T. 2009. Investigation of river eutrophication as part of a low dissolved oxygen total maximum daily load implementation. Water Science & Technology—WST Vol 59 No 1 pp 9–14 © IWA Publishing.

15. Stringfellow W.T., J.S. Hanlon, S. E. Borglin, and N.W.T. Quinn. 2008. Sources of Biochemical Oxygen Demand in Western Tributaries of the San Joaquin River, California. Agricultural Water Management, 95. pp 527-538.

16. Su, G.W., N.W.T. Quinn, P.J. Cook, and W. Shipp. 2006. Miniaturization of the flowing fluid electrical conductivity logging technique, Ground Water, Vol. 44, No.5 pp. 754-757, Sept-Oct, 2006. LBNL-59032.

17. Quinn N.W.T. and K.C. Jacobs 2006. An Emergency Environmental Response System to Protect Migrating Salmon in the Lower San Joaquin River.. Environmental Modelling and Software. Vol. 22, pp 416-422. Elsevier Science Ltd. Online. doi:10.1016/j.physletb.2003.10.071. April 17, 2006. LBNL-60622.

18. Quinn N.W.T., K.C. Jacobs, C.W. Chen and W.T Stringfellow. 2005. Elements of a Decision Support System for Real-Time Management of Dissolved Oxygen in the San Joaquin River Deep Water Ship Channel. Environmental Modelling and Software. Elsevier Science Ltd. June 2005. LBNL Report-55929.

19. Brekke, L.D., N.L. Miller, N.W.T. Quinn, J.A. Dracup, and D. Hilts. 2004. Climate Change Impacts on San Joaquin River Basin water allocation. Paper No. 02103RR. Journal of American Water Resources Association, Vol 40, No. 1, pp. 149-164.

20. Quinn N.W.T., L.D. Brekke, N.L. Miller, T. Heinzer, H. Hidalgo and J.A. Dracup. 2004. Model Integration For Assessing Future Hydroclimate Impacts On Water Resources, Agricultural Production And Environmental Quality in the San Joaquin Basin, California. Environmental Modelling and Software. Elsevier Science Ltd. Vol. 19. pp 305-316. (LBNL-51708)

21. Quinn N.W.T. and W.M. Hanna. 2003. A Decision Support System for Adaptive Real-Time Management of Seasonal Wetlands in California. 2003. Environmental Modelling and Software. Vol. 18, Issue 6, pp 503-511. Elsevier Science Ltd. (LBNL-50238)

22. Green, F.B., Lundquist, T.J., Quinn, M.W.T., Zarate, M.A., Zubieta, I.X. and W.J. Oswald. 2003. Selenium and nitrate removal from agricultural drainage using the AIWPS® technology. Water Science & Technology, 48 (2): 299-305, 2003.

23. Quinn N.W.T. and W.M. Hanna. 2002. Real-Time Adaptive Management of Seasonal Wetlands to Improve Water Quality in the San Joaquin River. Advances in Environmental Research. Vol. 5, pp 309-317. Elsevier Science Ltd.

24. Quinn N.W.T, N.L. Miller, J.A. Dracup, L. Brekke and L.F. Grober. 2001. An Integrated Modeling System for Environmental Impact Analysis of Climate Variability and Extreme Weather Events in the San Joaquin Basin, California. Advances in Environmental Research. Elsevier Science Ltd. Vol 5 (2001) 309-317.

25. Swayne, D., Denzer, R., Lilburne, L., Purvis, M., Quinn, N.W.T. and Storey, A., 2000. Environmental decision support systems: exactly what are they?. In: Denzer, R., Swayne, D.A., Purvis, M. and Schimak, G., Editors, 2000. Environmental software Systems. Environmental Information and Decision Support. IFIP TC5 WG5.11. International Federation for Information Processing, Part IV, Kluwer Academic Publishers, Norwell, Mass, pp. 259–268.

26. Quinn, N.W.T., T.J. Lundquist, F.B. Green, W.J. Oswald, T Leighton and M.A. Zarate. 2000. An algal-bacterial treatment system to reduce selenium loads in agricultural drainage. California Agriculture. November-December, Vol 54 No. 6.

27. Quinn N.W.T. and J. Karkoski. 1998. Potential for real time management of water quality in the San Joaquin Basin, California. Journal of the American Water Resources Association, Vol. 36, No. 6, December.

28. Quinn N.W.T. and P. Vorster. 1998. The comparative role of science in in resolving environmental problems at Kesterson Reservoir and Mono Lake, California. Lakes and Reservoirs : Research and Management, Vol. 3, 187-191.

29. Quinn, N.W.T., J. McGahan and M. Delamore. 1998. Innovative drainage management techniques to meet monthly and annual selenium load targets. California Agriculture, Vol. 52, No. 5, September-October. 1998.

30. Quinn N.W.T. and J. Clyde. 1998. A bed sediment sampler for precise depth profiling of contaminant concentrations in aquatic environments. Journal of Environmental Quality, Vol.27: pp. 64-67

31. Quinn, N.W.T., L.F. Grober, J. Kipps, C.W. Chen and E. Cummings. 1997. Computer model improves real-time management of water quality. California Agriculture, Vol. 51, No. 5, September-October. 1997

32. Quinn N.W.T, Richard B. Smith, Charles M. Burt, Tracy Slavin, and Stuart Styles. 1989. Evaluation of unlined ditch and reservoir seepage losses in Westlands Water District. California Agriculture, Nov-Dec.

33. Quinn N.W.T and J.M. Laflen. 1983. Characteristics of raindrop throughfall under corn canopy. Transactions of the ASAE. Vol 26, no 5, pp 1445-1450.

34. Quinn N.W.T. and J.M. Laflen. 1981. Properties of transformed rainfall under corn canopy. American Society of Agricultural Engineering , ASAE. paper no 81-2059..

35. Quinn N.W.T, R.P.C. Morgan and A.J. Smith. 1980. Simulation of soil erosion induced by human trampling. Journal of Environmental Management, Vol 10, no. 1, pp 155-165.

36. Elwell H.A. and N.W.T. Quinn. 1975. A rapid method for estimating the dry mass of soil from erosion research plots. Rhodesian Journal of Agricultural Research, Vol 13, pp 149-154.

BOOK CHAPTERS AND EDITED VOLUMES

1. Quinn N.W.T., 2013. International Perspectives on Water Quality Management and Pollutant Control, ISBN 978-953-51-0999-0, edited by Dr. Nigel W.T. Quinn. http://www.intechopen.com/books/international-perspectives-on-water-quality-management-and-pollutant-control

2. Quinn, N.W.T., D.E. Davis, C.H. Hansen. 2013. (in press). Advances in wetland salinity management and the assessment, avoidance, minimization, and compensation for wildlife impacts associated with evaporation basin operations. Salinity and Drainage in the San Joaquin Valley, California: Science, Technology, and Policy. To be published in both paper and electronic in Springer's Global Issues in Water Policy series.

3. Quinn N.W.T. 2013. (in press). The San Joaquin Valley: Salinity and Drainage Problems and the Framework for a Response. Salinity and Drainage in the San Joaquin Valley, California: Science, Technology, and Policy. To be published in both paper and electronic in Springer's Global Issues in Water Policy series. LBNL Topical Report – LBL-38498.

4. Quinn N.W.T., R. Ortega and L. Holm. 2011. Environmental sensor networks and continuous data quality assurance to manage salinity within a highly regulated river basin. Decision Support Systems in Agriculture, Food and the Environment: Trends, Applications and Advances

5. McIntosh, B.S., Giupponi, C., Voinov, A.A., Smith, C., Matthews, K.B., Monticino, M., Kolkman, M.J., Crossman, N., van Ittersum, M., Haase, D., Haase, A., Mysiak, J., Groot, J.C.J., Sieber, S., Verweij, P., Quinn, N., Waeger, P., Gaber, N., Hepting, D., Scholten, H., Sulis, A., van Delden, H., Gaddis, E. and Assaf, H. 2008. Bridging the Gaps Between Design and Use: Developing Tools to Support Environmental Management and Policy. In : Jakeman, A.J., Voinov, A.A., Rizzoli, A.E. and Chen, S.H. (eds.) Environmental Modelling, Software and Decision Support. Developments in Integrated Environmental Assessment Volume 3. Chapter 3. pp 33-48.

6. Mysiak, J., Brown, J.D., Jansen, J. and Quinn, N.W.T. 2008. Environmental Policy Aid Under Uncertainty. In : Jakeman, A.J., Voinov, A.A., Rizzoli, A.E. and Chen, S.H. (eds.) Environmental Modelling, Software and Decision Support. Developments in Integrated Environmental Assessment Volume 3. Chapter 6, pp 87-100.

7. Rizzoli, A.E., Leavesley, G., Ascough, J.C., Argent, R.M., Athanasiadis, I.N., Brilhante, V., Claeys, F.H.A., David, O., Donatelli, M., Gijsbers, P., Havlik, D., Kassahun, A., Krause, P., Quinn, N.W.T., Scholten, H., Sojda, R.S. and Villa, F. 2008. Integrated Modelling Frameworks for Environmental Assessment and Decision Support. In : Jakeman, A.J., Voinov, A.A., Rizzoli, A.E. and Chen, S.H. (eds.) Environmental Modelling, Software and Decision Support. Developments in Integrated Environmental Assessment Volume 3, Chapter 7, pp 101-118.

8. Assaf, H., van Beek, E., Borden, C., Gijsbers, P., Jolma, A., Kaden, S., Kaltofen, M., Labadie, J.W., Loucks, D.P., Quinn, N.W.T., Sieber, J., Sulis, A., Werick, W.J. and Wood, D.M. 2008. Generic Simulation Models for Facilitating Stakeholder Involvement in Water Resources Planning and Management: A Comparison, Evaluation, and Identification of Future Needs. In : Jakeman, A.J., Voinov, A.A., Rizzoli, A.E. and Chen, S.H. (eds.) Environmental Modelling, Software and Decision Support. Developments in Integrated Environmental Assessment Volume 3. Chapter 13, pp 229-246.

9. Hidalgo H., L.D. Brekke, N.L. Miller, N.W.T. Quinn, J. Keyantash and J.A. Dracup. 2006. Assessment of the Impacts of Climate Change on the Water Allocation, Water Quality and Salmon Production in the San Joaquin River Basin: in M. Ruth, K. Donaghy and P. Kirshen (eds), Regional Climate Change and Variability: Impacts and Responses, Cheltenham, UK and Northampton, MA: Edward Elgar. pp. 30–57.

10. Quinn, N.W.T, Carl W. Chen and W.T. Stringfellow. 2003. A Decision Support System for Real-Time Management of Dissolved Oxygen in the Stockton Deep Water Ship Channel. Environmental Software Systems. Environmental Knowledge and Information Systems IFIP TC5 WG5.11, 9th International Symposium on Environmental Software Systems (ISESS'2003), May 28-June 2, 2003 , Semmering, Austria. Edited by Gerald P. Schimak, Nigel W. T.Quinn, Ralf Denzer and David A. Swayne. Publisher: Copyright: 2003 by International Federation for Information Processing. LBNL No. 53394.

11. Environmental Software Systems. 2003. Environmental Knowledge and Information Systems IFIP TC5 WG5.11, 9th International Symposium on Environmental Software Systems (ISESS'2003), May 28-June 2, 2003 Edited by Gerald P. Schimak, Nigel W. T Quinn, Ralf Denzer and David A. Swayne. Copyright: 2003 by International Federation for Information Processing.

12. Quinn N.W.T. L.D. Brekke, K.L. Bashford, N.L. Miller, H. Hidalgo, P. Raju and J.A. Dracup 2002. Model Integration For Assessing Future Hydroclimate Impacts On Water Resources, Agricultural Economic

Sustainability And Environmental Quality. Environmental Software Systems. Environmental Information and Decision Support. IFIP TC5 WG5.11. Joint 3rd International Symposium on Environmental Software Systems (ISESS'2002) and International Environmental Modelling and Software Society, iEMSs June 24 - June 28, 2002, Lugano, Switzerland

13. Quinn N.W.T. N.L. Miller, J.A. Dracup, L. Brekke and L. Grober 2000. An integrated modeling system for environmental impact analysis of climate variability and extreme weather events in California. Environmental Software Systems. Environmental Information and Decision Support. IFIP TC5 WG5.11, 3rd International Symposium on Environmental Software Systems (ISESS'2000), May 28-June 2, 2000, Zell am See, Austria. Edited by: Ralf Denzer, David A. Swayne, Martin Purvis and Gerald Schimak. Publisher: Kluwer Academic Publishers, Massachusetts. Copyright: 2000 by International Federation for Information Processing.

14. Quinn N.W.T. 1999. Real time management of water quality in the San Joaquin Basin, California. Environmental Software Systems. Environmental Information and Decision Support. IFIP TC5 WG5.11, 3rd International Symposium on Environmental Software Systems (ISESS'99), August 30-September 2, 1999, Dunedin, New Zealand. Edited by: Ralf Denzer, David A. Swayne, Martin Purvis and Gerald Schimak. Publisher: Kluwer Academic Publishers, Massachusetts. Copyright: 2000 by International Federation for Information Processing.

15. Quinn N.W.T. 1991. Assessment of ground water pumping as an option for water table management and drainage control in the western San Joaquin Valley. In "The Economics of Water and Drainage in Agriculture". Editors : A. Dinar and D. Zilberman, Kluwer Academic Publishers.

16. Quinn N.W.T. 1988. A screening study of management alternatives for selenium drainage reduction in the San Joaquin Valley of California. In: "Selenium in Agriculture and the Environment". American Society of Agronomy, Madison, Wisconsin.

CONFERENCE PROCEEDINGS, LBNL REPORTS, ABSTRACTS AND POSTERS

1. Quinn, N.W.T. 2013. Challenges in planning and implementation of a real-time salinity management TMML. ASCE EWRI Conference. Cincinnati, OH. May 19-23, 2013.

2. Quinn N.W.T. Visualization tool for real-time salinity management in Grassland Water District. Presentation to the CVSALTS Lower San Joaquin River Committee. Modesto, CA. Feb 14, 2013.

3. Quinn, N.W.T. 2013. The POWER of DATA Sensor data-induced cultural change within the Grassland Basin. California Water and Environmental Modeling Forum, Folsom, CA. Apr 22-24, 2013.

4. Quinn, N.W.T. 2013. Sensor Web Technologies for Real-Time Scheduling of Salt Loading from Seasonally Managed Wetlands California Water and Environmental Modeling Forum, Folsom, CA. Apr 22-24, 2013.

5. Quinn, N.W.T. 2012. Salinity Management Research Needs Panel. Central Valley Salinity and Nitrate Conference. EPA Building, Sacramento, CA. Nov 15-16, 2012.

6. Quinn, N.W.T. 2012. Implementation of Basin-Wide Real-Time Salinity Management: A Managed Seasonal Wetland Exemplar. USCID Water Management Conference, Reno, NV. November 12-16, 2012

7. Quinn, N.W.T. 2012. Real-time salinity management in the San Joaquin Basin. Presentation and Conference Abstract. Salt and Nitrate in Groundwater: Finding Solutions for a Widespread Problem" Symposium, Groundwater Resources Association of California, Fresno, CA. June 13-14, 2012.

8. Faunt C., J. Traum, M. Sneed, RT. Hanson, and N.W.T. Quinn. 2012. Updates and Refinements to the Central Valley Hydrologic Model, with an Emphasis on Improving the Simulation of Land Subsidence in the San Joaquin Valley. California Groundwater: Data, Planning and opportunities. Groundwater Resources Association Conference Abstract. Oct. 4-5. Rohnert Park, CA.

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PATENT APPLICATIONS

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